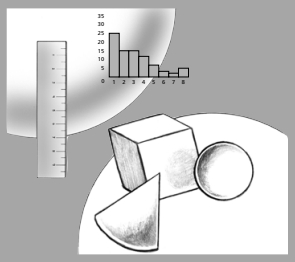
Wisconsin Knowledge and Concepts Examinations
Criterion-Referenced Test

Released Item Book

Mathematics



Grade

5

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Wisconsin Knowledge and Concepts Examinations—Criterion-Referenced Test
(WKCE-CRT)

Released Item Book

What are released items?

The items in this book are actual items from the fall 2005 state assessment, the Wisconsin Knowledge and Concepts Examinations—Criterion-Referenced Test (WKCE-CRT). These items will not be used again on the state assessment and may, therefore, be used in Wisconsin for professional development, improving instruction, and student practice. The items in this book illustrate the formats and kinds of items that students will encounter on the WKCE-CRT.

How do I use this book?

Professional Development

Released items are useful as educators engage in conversations about what students are expected to know and be able to do to demonstrate proficiency on the state assessments relative to the state model academic standards. Released items can inform discussions about state and local standards, curriculum, instruction, and assessment.

Improving Instruction

Teachers may use released items in classroom activities that help students understand how to:

- solve problems
- determine which answer choices are correct, which are incorrect, and why
- respond to constructed response items with complete, thoughtful answers
- approach long and/or multi-step tasks
- use good test-taking strategies.

Student Practice

Students may perform better and with less anxiety if they are familiar with the format of the test and with the types of items they will be required to answer. See the accompanying guide for instructions on administering the released item book as a practice test and for the answer key. Note that a student's score on the practice test cannot be converted to a scale score, used to predict performance on the operational WKCE-CRT, or used to make inferences about the student's learning.

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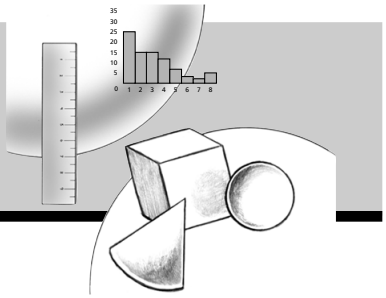
Mathematics

Session 1



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1 Look at the number sentence below.

$$6 \times 4 = \square$$

Which of these does not make the number sentence true?

Ⓐ 12×2

Ⓑ $12 + 12$

Ⓒ $24 \div 1$

Ⓓ $24 - 4$

2 Look at the table below.

Population of Fairhill

Year	Number of People
1990	1,495
2000	3,618

Based on the information in the table, what was the change in the number of people living in Fairhill from 1990 to 2000 ?

Ⓐ 2,123

Ⓑ 2,283

Ⓒ 5,113

Ⓓ 5,312

3 Sam completed $\frac{2}{7}$ of a puzzle and Sheree completed $\frac{3}{7}$ of the same puzzle.

What fraction of the entire puzzle did they complete?

Ⓐ $\frac{5}{7}$

Ⓑ $\frac{5}{14}$

Ⓒ $\frac{6}{7}$

Ⓓ $\frac{6}{14}$

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4 Ms. Flynn drinks 8 glasses of water each day. The number sentence below can be used to find the number of days that it takes Ms. Flynn to drink 32 glasses of water.

Let $\square$ represent the number of days.

$$32 \div \square = 8$$

How many days does it take Ms. Flynn to drink 32 glasses of water?

Ⓐ 3

Ⓑ 4

Ⓒ 6

Ⓓ 7

5 The sales receipt below shows the groceries that Jose purchased from the supermarket.

Sales Receipt	
Bananas	$0.89
Bread	$1.09
Cereal	$3.79
Salmon	$6.39

What is the estimated cost of Jose's groceries? Round the answer to the nearest dollar.

Ⓐ $10.00

Ⓑ $11.00

Ⓒ $12.00

Ⓓ $14.00

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6 Kathy gave the cashier $5.00 for a soda that cost $0.75.

Step A

How much change did Kathy receive?

Answer: $_____

Step B

Explain how you found the amount of change that Kathy received. Use words and/or numbers in your answer.

_____

_____

_____

_____

STOP

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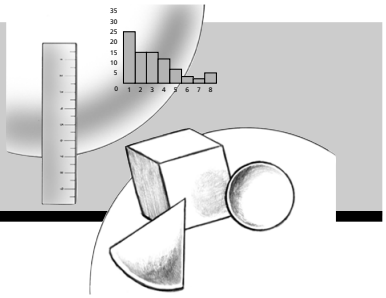
Mathematics

Session 2



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7 Look at the number pattern below.

35, 48, ___?___ , 74, 87, . . .

What number is missing from this pattern?

Ⓐ 51

Ⓑ 59

Ⓒ 60

Ⓓ 61

8 The data below show the number of minutes that 5 students each spent on homework during one day.

22, 17, 58, 49, 49

What is the range of these times?

Ⓐ 27 minutes

Ⓑ 32 minutes

Ⓒ 41 minutes

Ⓓ 49 minutes

---

9 Erica fills bowls with floating candles. The table below shows the relationship between the number of bowls she uses and the number of candles in each bowl.

Floating Candles

Number of Bowls	Number of Candles
4	24
6	36
8	48
9	?

Using the pattern in the table, how many candles does Erica put in 9 bowls?

Ⓐ 50

Ⓑ 54

Ⓒ 60

Ⓓ 63

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10 Use the inch side of your ruler to help you solve this problem.

Look at the line segment below.

What is the length of the line segment to the nearest $\frac{1}{2}$ inch?

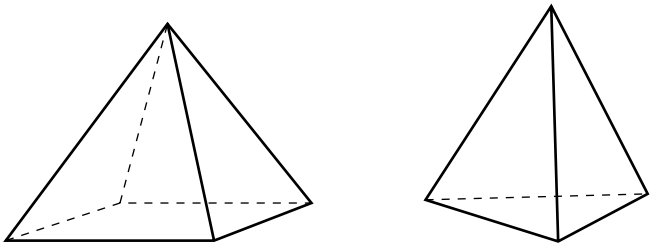
Ⓐ 5 inches

Ⓑ $5\frac{1}{2}$ inches

Ⓒ 6 inches

Ⓓ $6\frac{1}{2}$ inches

11 Look at the geometric figures below.



Which statement about both figures is true?

Ⓐ Both figures have square bases.

Ⓑ Both figures have only six edges.

Ⓒ Both figures have triangular faces.

Ⓓ Both figures have only four vertices.

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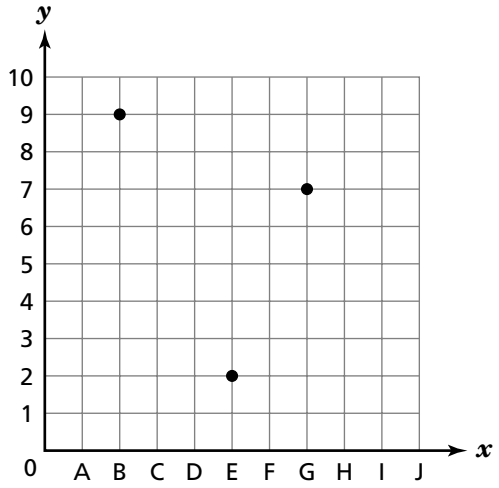
12 Look at the ordered pairs below.

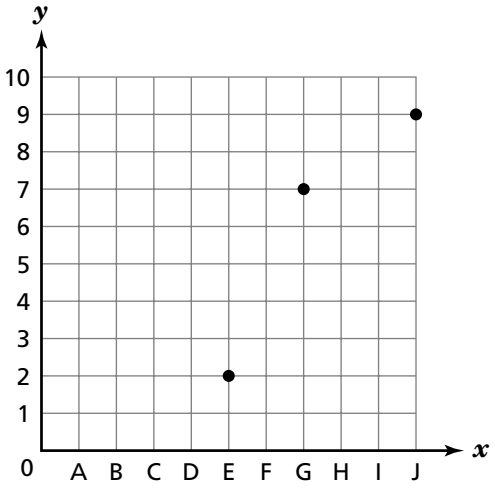
(E, 2) (G, 7) (J, 9)

Which coordinate grid shows the ordered pairs plotted correctly?

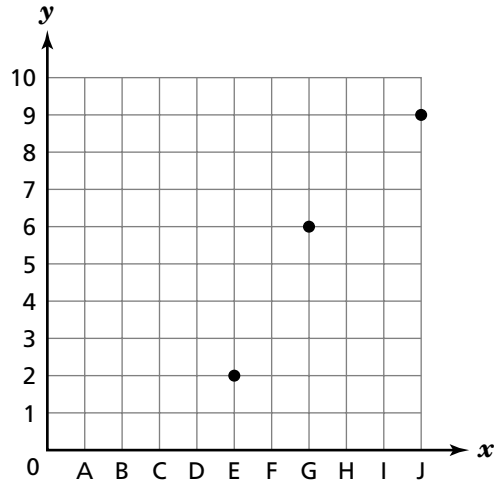
Ⓐ



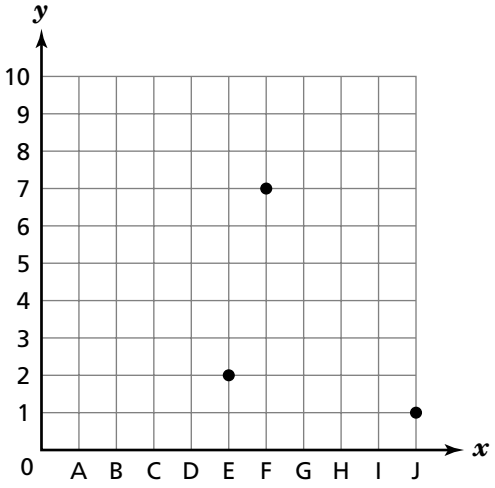
Ⓒ



Ⓑ



Ⓓ



Go On

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13 Mr. Lee's class made a fruit salad. They cut 9 apples into 6 pieces each.

Step A

Write a number sentence that shows the total number of apple pieces that Mr. Lee's class used.

Answer: _____

Step B

Explain why the number sentence you wrote shows the number of apple pieces Mr. Lee's class used. Use words and/or numbers in your answer.

_____

_____

_____

_____

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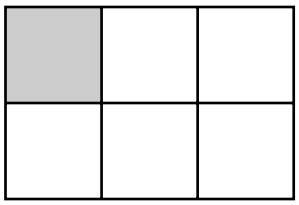
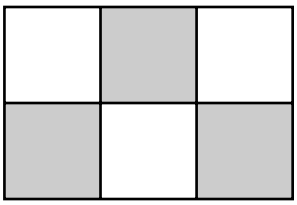
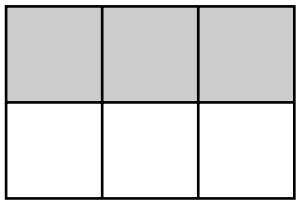
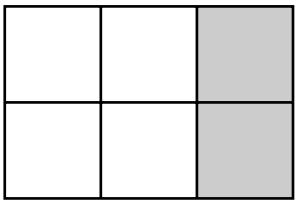
14 Which figure has a shaded area of $\frac{1}{3}$?

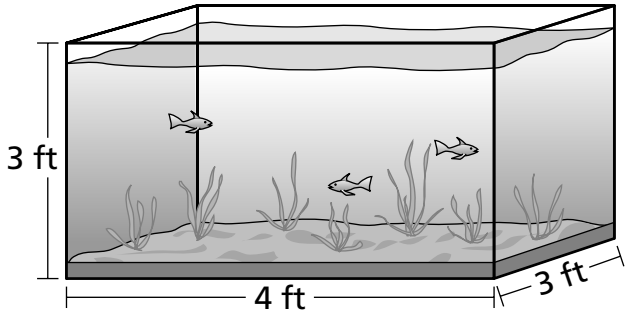
Ⓐ 

Ⓒ 

Ⓑ 

Ⓓ 

15 The aquarium shown below is located in Mr. Darcy's office.



Note: The figure is not drawn to scale.

Which of these units would be best for measuring the capacity of the aquarium?

Ⓐ cup

Ⓑ pint

Ⓒ gallon

Ⓓ ounce

Go On

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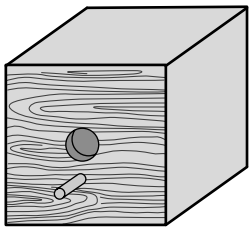
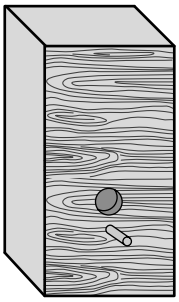
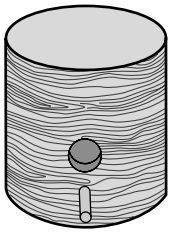
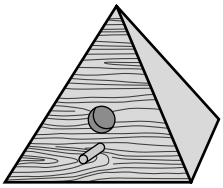
16 The bottom of Cindy's birdhouse is shown below.

Which of these cannot be Cindy's birdhouse?

Ⓐ 

Ⓒ 

Ⓑ 

Ⓓ 

17 Look at the shape pattern below.

Which of these letter patterns follows the same rule as the shape pattern shown?

Ⓐ A B C D A B C D A B C D A B C

Ⓑ A B C D B A B C D B A B C D B

Ⓒ A B A C A D A B A C A D A B A

Ⓓ A B B A B A B B A B A B B A B

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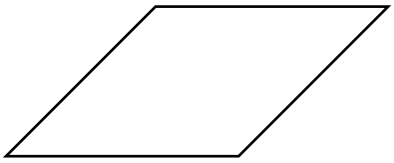
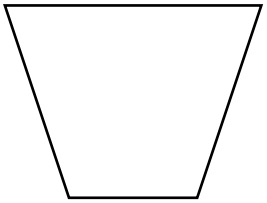
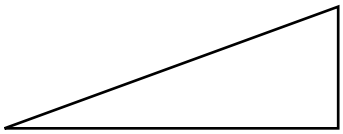
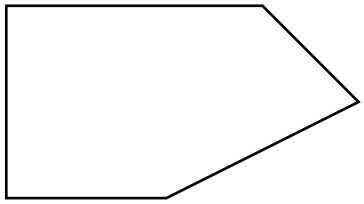
18 Which of these shapes has one line of symmetry?

Ⓐ 

Ⓑ 

Ⓒ 

Ⓓ 

19 The data below shows the number of books that some students read in a week.

2, 1, 4, 7, 6

What is the range of the books read?

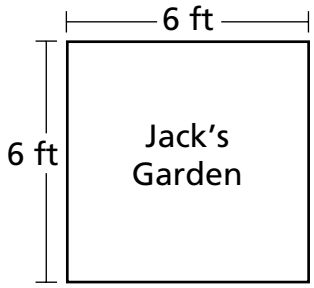
Ⓐ 4

Ⓑ 5

Ⓒ 6

Ⓓ 7

20 Jack wants to build a fence around his square garden.



How many feet of fence will Jack need?

Ⓐ 12 feet

Ⓑ 18 feet

Ⓒ 24 feet

Ⓓ 36 feet

STOP

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Mathematics Grade 5 Released Item Book

Wisconsin Department of Public Instruction
Elizabeth Burmaster, State Superintendent